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EXAMINER	
TORRENTE, RICHARD T	

ART UNIT	PAPER NUMBER
4154	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/501,949	TALMON ET AL.	
	Examiner	Art Unit	
	RICHARD TORRENTE	4154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 July 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 July 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/10/04, 9/12/05*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because it should be on a separate page. Correction is required. See MPEP § 608.01(b).

2. Claim 15 is objected to because of the following informalities: item “c)” does not have any claimed merit. Appropriate correction is required.

3. Claims 28 and 29 are objected to because of the following informalities: claims “substantially as described and illustrated” are vague. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-10, 13-23, and 26-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Meyer et al. (NPL: A New System for Video-Based Detection of Moving Objects and its Integration into Digital Networks, 1996, hereinafter “Meyer”) (Already of record).

Regarding claim 1, Meyer teaches a method for performing event detection and object tracking in image streams, comprising: a) installing in field, a set of image acquisition devices (see camera in fig. 7), each of which comprising a local

programmable processor (see detection in fig. 7, where it is inherent that a processor is needed to process detection in images) for converting the acquired image stream, consisting of one or more images, to a digital format (see coder in fig. 7, although not shown, it is inherent that a, A/D converter is needed prior to encoding of the coder), and a local encoder (see coder in fig. 7), for generating, from said image stream, features, being parameters related to attributes of objects in said image stream, and for transmitting a feature stream, whenever said motion features exceed a corresponding threshold (see third P of abstract for object oriented statistical multi-features and transmission in page 105, and see P above section III in page 106 for threshold); b) connecting each image acquisition device (camera) to a data network through a corresponding data communication channel (see network in fig. 7 in page 108, and data channel in fig. 8); c) connecting an image processing server (surveillance center) to said data network (see network connection in fig. 7), said server being capable of determining said threshold, and of processing said feature stream (see last P in abstract in page 105 and fig. 7 in page 108, where it is anticipated that the server controlling, receiving, and displaying the data stream has the capability to process the incoming threshold feature stream); and d) whenever said server receives features from a local encoder through its corresponding data communication channel and said data network (see each coder communication network in fig. 7 and network to the surveillance center in fig. 7), obtaining indications regarding events in said image streams by processing, by said server (surveillance center), said feature stream, and transmitting said indications

to an operator (see last P in page 108, where it is anticipated that the surveillance center will have operator monitoring the indication of events).

Regarding claim 2, Meyer further teaches wherein the local encoder is a composite encoder (see coder in fig. 7), being the local encoder that further comprises circuitry for compressing the image stream (see coder in fig. 7, although not shown, it is inherent that an encoder comprises circuitry for compressing image stream), said composite encoder being capable of operating in a first mode (see alarm event in third P of page 109, although not explicitly shown, it is anticipated that an alarm events only occurs if the camera is in the alarm monitoring mode. Thus the first mode is the alarm monitoring mode), during which it generates and transmits the features to the server (see third bullet item in the Conclusion in page 110), and in a second mode (see items images and messages in third P of page 109), during which it transmits to said server, in addition to said features, at least a portion of said image stream in a desired compression level (see images in third P of page 109, and see fourth bullet in the Conclusion in page 110, where a portion of an image stream is an image), according to commands sent from said server (see fourth bullet item in conclusion in page 110).

Regarding claim 3, Meyer further teaches the method further comprising, controlling each composite encoder, by a command sent from said server, to operate in its first mode; as long as the server receives features from a composite encoder: a) controlling that composite encoder, by a command sent from said server, to operate in its second mode; and b) obtaining indications regarding events in said image streams by processing, by said server, said feature stream, and transmitting said indications

and/or their corresponding image streams to an operator (see last sentence in page 108 for indication that all cameras is controlled by the server, this anticipates control of encoder modes, and see last P in page 108, and see monitor in fig. 7 in page 108, where it is anticipated that the surveillance center will have operator viewing the indicated event on the monitor).

Regarding claim 4, Meyer further teaches the method further comprising decoding one or more compressed image streams containing events by said server, and transmitting the decoded image streams to the display of an operator, for viewing (see surveillance center monitor in fig. 7, where it is anticipated that decoding is performed on the transmitted encoded data streams to enable viewing on the monitor).

Regarding claim 5, Meyer further teaches the method further comprising recording (storage of images) one or more compressed image streams obtained while their local encoder operates in its second mode (see first P of page 109).

Regarding claim 6, Meyer further teaches the method further comprising dynamically allocating additional image processing resources, in the server, to data communication channels that receive image streams (see allocating in fig. 7 compared to fig. 6, this means the server can allocate additional image processing resources to all the data communication channels).

Regarding claim 7, Meyer further teaches the method wherein one or more feature streams obtained while operating in the first mode, comprises only a portion of the image (see alarm event in the third P of page 109, where a feature describing an image is a portion of the image).

Regarding claim 8, Meyer further teaches the method further comprising generating and displaying a graphical polygon that encompasses an object of interest, being within the frame of an image or an AOI in said image (see fig. 3).

Regarding claim 9, Meyer further teaches the method further comprising generating and displaying a graphical trace indicating the history of movement of an object of interest, being within the frame of an image or an AOI in said image (see fig. 10).

(Claimed Markush group reads on the genus images. All the species are interpreted as alternative equivalents. Should Applicant argue each species is independent; a species election will be required).

Regarding claim 10, Meyer further teaches the method wherein the image stream is selected from the group of images that comprises video streams, still images, computer generated images, and pre-recorded digital or analog video data (only one group of the Markush group will be shown, see video sequences in abstract in page 105).

(Claimed Markush group reads on the genus motion features. All the species are interpreted as alternative equivalents. Should Applicant argue each species is independent; a species election will be required).

Regarding claim 13, Meyer further teaches wherein the features are selected from the following group: motion features; color, portion of the image; edge data; and frequency related information (only one group of the Markush group will be shown, see motion features in the third P under section II in page 105).

(Claimed Markush group reads on the genus motion detection applications. All the species are interpreted as alternative equivalents. Should Applicant argue each species is independent; a species election will be required)

Regarding claim 14, Meyer further teaches a method further comprising performing, by the server, one or more of the following operations and/or any combination thereof: License Plate Recognition (LPR); Facial Recognition (FR); detection of traffic rules violations; behavior recognition; fire detection; traffic flow detection; smoke detection, using a feature stream, received from the local encoder of at least one image acquisition device, through its data communication channel (only one group of the Markush group will be shown, see behavior recognition in fig. 10, where the behavioral movement is recognized).

Regarding claim 15, Meyer teaches a system for performing event detection and object tracking in image streams, comprising: a) a set of image acquisition devices (see camera in fig. 7), installed in field, each of which includes: a. 1) a local programmable processor (see detection in fig. 7, where it is inherent that a processor is needed to process detection in images) for converting the acquired image stream, to a digital format a.2) a local encoder (see coder in fig. 7), for generating, from said image stream, features, being parameters related to attributes of objects in said image stream, and for transmitting a feature stream, whenever said motion features exceed a corresponding threshold; b) a data network (see network connections in fig. 7), to which each image acquisition device is connected through a corresponding data communication channel; c); and d) an image processing server network (see surveillance center in fig. 7)

connected to said data network, said server being capable of determining said threshold, of obtaining indications regarding events in said image streams by processing said feature stream, and of transmitting said indications to an operator.

Regarding claim 16, Meyer further teaches a system in which the local encoder is a composite encoder (see coder in fig. 7), being the local encoder that further comprises circuitry for compressing the image stream, said composite encoder being capable of operating in a first mode (see alarm event in third P of page 109, although not mentioned, it is anticipated that an alarm events only occurs if the camera is in the alarm monitoring mode. Thus the first mode is the alarm monitoring mode), during which it generates and transmits the features to the server (see third bullet item in conclusion in page 110), and in a second mode (see images and messages in third P of page 109), during which it transmits to said server, in addition to said features, at least a portion of said image stream in a desired compression level, according to commands sent from said server (see fourth bullet item in conclusion in page 110).

Regarding claim 17, Meyer further teaches a system further comprising an operator display (see display in fig. 7), for receiving one or more image steams that are decoded by the server and contain events.

Regarding claim 18, Meyer further teaches a system further comprising a network video recorder (see first P of page 109) for recording one or more image streams, obtained while their local encoder operates in its first mode.

Regarding claim 19, Meyer further teaches a system in which the server is capable of dynamically allocating additional image processing resources to data

communication channels that receive image streams (see allocating in fig. 7 compared to fig. 6, this means the server can allocate additional image processing resources to all the data communication channels).

Regarding claim 20, Meyer further teaches a system in which one or more image streams obtained while operating in the first mode, comprises only a portion of the image that corresponds to a desired AOI (see alarm event in the third P of page 109, where a feature describing an image is a portion of the image).

Regarding claim 21, Meyer further teaches a system in which the server further comprises processing means for generating and displaying a graphical polygon that encompasses an object of interest, being within the frame of an image or an AOI in said image (see fig. 3).

Regarding claim 22, Meyer further teaches a system in which the server further comprises processing means for generating and displaying a graphical trace indicating the history of movement of an object of interest, being within the frame of an image or an AOI in said image (see fig. 10).

(Claimed Markush group reads on the genus images. All the species are interpreted as alternative equivalents. Should Applicant argue each species is independent; a species election will be required).

Regarding claim 23, Meyer further teaches a system in which the image stream is selected from the group of images that comprises video streams, still images, computer generated images, and pre-recorded digital or analog video data (only one group of the Markush group will be shown, see video sequences in abstract).

(Claimed Markush group reads on the genus motion features. All the species are interpreted as alternative equivalents. Should Applicant argue each species is independent; a species election will be required).

Regarding claim 26, Meyer further teaches a system in which the features are selected from the following group: motion features; color, portion of the image; edge data; and frequency related information (only one group of the Markush group will be shown, see motion features in the third P under section II in page 105).

(Claimed Markush group reads on the genus motion detection. All the species are interpreted as alternative equivalents. Should Applicant argue each species is independent; a species election will be required).

Regarding claim 27, Meyer further teaches a system in which the server further comprises processing means for performing one or more of the following operations and/or any combination thereof: License Plate Recognition (LPR); Facial Recognition (FR); detection of traffic rules violations; behavior recognition; fire detection; traffic flow detection; smoke detection, using a feature stream, received from the local encoder of at least one image acquisition device, through its data communication channel (only one group of the Markush group will be shown, see behavior recognition in fig. 10, where the behavioral movement is recognized).

Regarding claim 28, Meyer teaches a method for performing event detection and object tracking in image streams, substantially as described and illustrated (see Abstract and fig. 10).

Regarding claim 29, Meyer teaches a system for performing event detection and object tracking in image streams, substantially as described and illustrated (see Abstract and fig. 10).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 11 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer et al. (NPL A New System for Video-Based Detection of Moving Objects and its Integration into Digital Networks, hereinafter "Meyer") (Already of record), and further in view of Wang et al. (US PN 6,266,369 B1).

Regarding claim 11, Meyer does not teach wherein the image streams are video streams, compressed using MPEG format. Wang, solving the same bandwidth reduction, teaches utilizing an MPEG video compression format for the benefit of bandwidth reduction (see column 3, lines 1-15). Given the teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the MPEG video compression format for the benefit of reduced bandwidth.

Regarding claim 24, Meyer does not teach a system in which the image streams are video streams, compressed using MPEG format. Wang, solving the same bandwidth reduction, teaches utilizing an MPEG video compression format for the

benefit of bandwidth reduction (see column 3, lines 1-15). Given the teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the MPEG video compression format for the benefit of reduced bandwidth.

8. Claims 12 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meyer et al. (NPL A New System for Video-Based Detection of Moving Objects and its Integration into Digital Networks, hereinafter “Meyer”) (Already of record), and further in view of Seeley et al (US PN 6,069,655).

Regarding claim 12, Meyer does not teach wherein during each mode, the encoder uses different resolution and frame rate. Seeley, in the same field on endeavor, teaches using different resolution and frame rate for different mode for the benefit of reduced bandwidth in transmission of no alarm (see resolution mode in fig. 8A and 8B, frame rate mode in fig. 9, and column 4, lines 40-51, where it is interpreted as the resolution and frame rate of videos are transferred at regular setting, upon alarming, high frame rate and high resolution are transferred). Given the teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the different resolution and frame rate feature for the benefit of reduced bandwidth in transmission when there is no alarm.

Regarding claim 25, Meyer does not teach a system in which during each mode, the encoder uses different resolution and frame rate. Seeley teaches using different resolution and frame rate for different mode (see resolution mode in fig. 8A and 8B, frame rate mode in fig. 9, and column 9, lines 40-51, where it is interpreted as the

resolution and frame rate of videos are transferred at regular setting, upon alarming, high frame rate and high resolution are transferred). Given the teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the different resolution and frame rate feature for the benefit of reduced bandwidth in transmission when there is no alarm.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RICHARD TORRENTE whose telephone number is (571)270-3702. The examiner can normally be reached on M-F: 7:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Ortiz can be reached on (571) 272-1206. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RT

/Angela Ortiz/
Supervisory Patent Examiner, Art Unit 4154